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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/702,616	11/07/2003	Yasuaki Ootera	244882US-2S DIV	8491
22850	7590	08/04/2004	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			ORTIZ CRIADO, JORGE L	
		ART UNIT	PAPER NUMBER	
		2655		

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/702,616	OOTERA, YASUAKI	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jorge L Ortiz-Criado	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 07 November 2003.

2a)  This action is **FINAL**.      2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-6 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5)  Claim(s) \_\_\_\_\_ is/are allowed.  
6)  Claim(s) 1-6 is/are rejected.  
7)  Claim(s) \_\_\_\_\_ is/are objected to.  
8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 07 November 2003 is/are: a)  accepted or b)  objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/2003.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_.

**DETAILED ACTION**

***Specification***

1. The disclosure is objected to because of the following informalities:
  - a. In page 5, line 8, the word "title" should be "tilt"
  - b. In page 9, the lines 5-7 are duplicated in lines 8-10,
  - c. In page 11, the lines 2-4 are duplicated in lines 5-7.
  - d. In page 19, line 12, the number "12" should be "102";
  - e. In page 19, line 15, the word "plat" should be "plate".
  - f. In page 20, line 9, the number "10" should be "103"
  - g. In page 23, line 6, the number "101" should be "102".
  - h. In page 25, line 3, the number "101a" should be "101b".
  - i. In page 26, line 2, the number "101" should be "110"
  - j. In page 26, line 16, the number "101" should be "102".
  - k. In page 30, line 12, the word "tile" should be "tilt".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The limitation **tangential tilt** in the independent claim 1, which claim 5 depends, is "**0.1° or less**" and the limitation **tangential tilt** of the dependent claim 5 is **0.15°** that falls out of the range of the independent claim 1 limitation range (where **0.15° > 0.1°**), and is considered indefinite and does not particularly point out subject matter which applicant regards as the invention.

The limitation **tangential tilt** in the independent claim 1, which claim 6 depends, is "**0.1° or less**" and the limitation **tangential tilt** of the dependent claim 6 is **0.2°** that falls out of the range of the independent claim 1 limitation range (where **0.2° > 0.1°**), and is considered indefinite and does not particularly point out subject matter which applicant regards as the invention.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Isomura et al. J.P. Publication No. 11-096598.

Regarding claim 1, Isomura et al. discloses an optical disk (See Detailed description [0050-[0068]; Drawings 1-9) comprising:

a data recording surface varying a state when irradiated with light (see Detailed description [0050-[0053]; Drawing 1(c)(d), ref# 3,4);

a first substrate for supporting the data recording surface (see Drawing 1(c)(d), ref# 1,2); and

a second substrate for protecting the data recording surface (see Drawing 1(c)(d), ref# 1,2),

wherein tilt in a radial direction of the first and second substrates as a whole is 0.5 degrees or more (See Detailed description [0067]) and tilt in a tangential direction is 0.1 degrees or less (Inherent to Isomura et al.)

Regarding claim 2, Isomura et al. discloses wherein the tilt in the radial direction is convex to an adhering direction when the second substrate is adhered (see Detailed description [0064-[0067]; Drawing 1(c)(d)(e)).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isomura et al. in view of Sandstrom U.S. Patent No. 5,972,461.

Regarding claims 3 and 5, Isomura et al. discloses all the limitations based on claim 1, as outlined above. Isomura et al. further discloses wherein an upper limit for the tilt in the radial direction is desirable to be 0.7 degrees and the upper limit depends on the apparatus to be used with the optical disk (See Detailed description [0062]) Isomura et al. discloses that is not limited to the thickness of the optical disk to obtain the 0.7 or less (See Detailed description [0114]-[0116]).

Isomura et al. does not expressly disclose when a thickness of an entire optical disk is 0.6 mm (DVD disks).

However the feature of also obtaining tilt limits of 0.7 or less its well known in the art as evidenced by Sandstrom, which discloses optical disk with thickness of 0.6mm (DVD disks) which the upper limit of the tilt is at least 0.7 or less (See Fig. 3, example.  $8\text{mrad} \approx 0.46 \text{ degrees}$ )

It would have been obvious to one with ordinary skill in the art at the time of the invention to provide tilt of 0.7 or less in order to improve the overall disk flatness of a disk with a thickness of 0.6m (DVD disks) as teaches by Sandstrom.

It would have been obvious of matter of design choice to modify the Isomura et al. by having the upper limit for the tilt in tangential direction of 0.15 degrees or any desired value for disk of thickness the entire optical disk is 0.6mm, since the tolerable tilt angle for optical disk varies in accordance with the apparatus for reproducing the information and since applicant has not disclosed that having the specific degrees solves any sated problem or is for any particular purpose.

6. Claims 4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Isomura et al.

Regarding claim 4, Isomura et al. discloses that is not limited to the thickness of the optical disk to obtain the 0.7 or less as outlined (See Detailed description [0114]-[0116]) and it would have been obvious of matter of design choice to modify the Isomura et al. by having the upper limit for the tilt in the radial direction is 0.8 degrees or any desired value for disk of thickness the entire optical disk is 0.5mm or less, since the tolerable tilt angle for optical disk varies in accordance with the apparatus for reproducing the information and since applicant has not disclosed that having the specific degrees solves any sated problem or is for any particular purpose.

Regarding claim 6, Isomura et al. discloses that is not limited to the thickness of the optical disk and it would have been obvious of matter of design choice to modify the Isomura et al. by having the upper limit for the tilt in the tangential direction is 0.2 or any desired value for disk of thickness the entire optical disk is 0.5mm or less, since the tolerable tilt angle for optical disk varies in accordance with the apparatus for reproducing the information and since applicant has not disclosed that having the specific degrees solves any sated problem or is for any particular purpose.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jorge L Ortiz-Criado whose telephone number is (703) 305-8323. The examiner can normally be reached on Mon.-Thu.(8:30 am - 6:00 pm),Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris H To can be reached on (703) 305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

joc

W. R. YOUNG  
PRIMARY EXAMINER